Why Small Brigade Combat Teams Undermine Modularity

Lieutenant Colonel Stephen L. Melton, U.S. Army, Retired

THE MODULAR transformation of the Army will not achieve its goal of flattening and rationalizing command echelons and providing more usable combat power for operational deployments as long as the Army maintains the small brigade combat team (BCT) as currently designed. Underuse of the BCT and subordinate battalion headquarters is driving unwanted, unnecessary growth of BCT and unit of employment (UEx) headquarters, and the BCT's small size and combat maneuver focus are causing special-purpose support units of action (SUAs) to proliferate. The Army has not eliminated redundancies and inefficiencies in BCT, UEx, and SUA designs. The Army cannot afford unneeded headquarters. Ultimately, soldiers in the field will be the ones who pay the bills for the profligate overhead the Army is now creating.

The problem begins with the small, maneuver-focused BCT, which is a flawed foundation for modularity. One of modularity's original goals was to reduce Army echelons from four to three. Figure 1 depicts the BCT as being significantly more capable than the current brigade, which enables the UEx to function in the span from division to corps.[1]

The Army hoped that enhancing the brigade would allow fewer levels of command and fewer two- and three-star headquarters as division to corps functions and capabilities migrated to the BCT. But that is not the way things worked out. Instead, the Army—

- Elected to go from 33 existing brigades to 43 BCTs to increase the number of brigade-equivalent units available for operations overseas.
- Established four BCTs per division by taking the assets of the legacy three-brigade division and its associated corps slices and dividing them among four ground maneuver BCTs (which led to no significant increase in overall division combat power).
- Left the number of infantry and armor companies about the same, increasing it by five in the heavy division, but decreasing it by seven in the infantry divisions (IDs) (figure 2).[2]

The BCT design is weaker than its Force XXI or limited conversion brigade predecessor because—

- Small BCTs trade armor and infantry companies for reconnaissance troops in the hope that improved situational awareness will reduce the need for combat power.
- The heavy brigade loses one of its infantry (IN)/armor (AR) teams and two howitzers, although adding 29 Bradleys to the armed reconnaissance squadron (ARS) and scout platoons replaces much of the lost firepower.
- On average, heavy BCTs have about 10 percent fewer tanks, but more Bradleys.

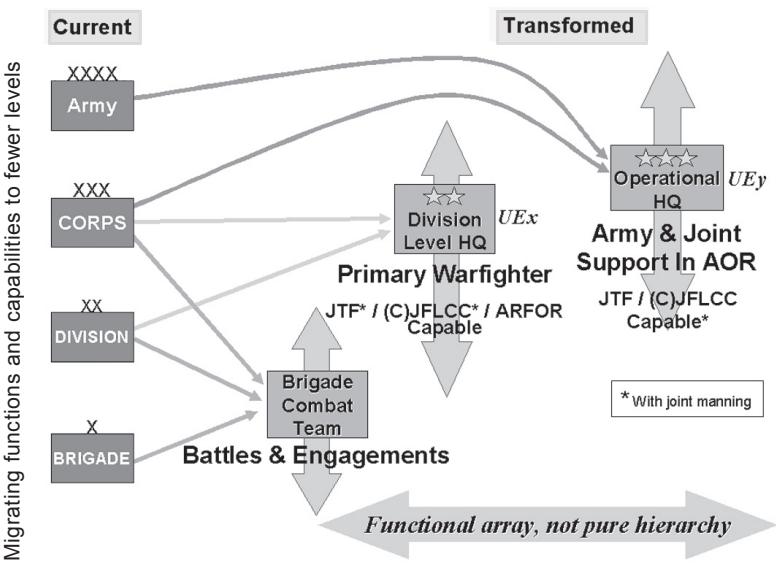

Figure 1. Command echelons transformed.

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• The infantry brigade loses one-third of its companies, two howitzers, its share of line-of-sight antitank battalion support, and is only partially compensated by two scout platoons.

Some would argue that fielding improved weapons systems and equipment will enhance the actual combat power of the new BCTs. They are correct, but the same could be said if predecessor brigades had fielded the new equipment.

The Army has not elevated the BCT to assume divisional and corps roles, as promised. The BCT, like the divisional brigade, is built around its maneuver battalions and direct support by sappers and artillery. True, the BCT can achieve greater situational awareness because of enhanced scouting and intelligence, but it has no greater a menu of capabilities to forcefully change a situation than the old brigades. The small, ground-maneuver-focused BCT still needs links to a division for additional combat, combat support (CS), and combat service support (CSS) functions. UEx-level SUAs are an attempt to make up for the deficiencies of the small BCT design.

A More Expensive Division-Based Army

To date, modularized divisions share the same pattern.

• They are building to four BCTs.

• Their division headquarters is growing in size and capability into a UEx.

• They have an aviation brigade (two in the 101st Airborne Division [ABD]).

• They are organizing the old division base into one or more SUAs.

So far, each has a sustainment SUA, and heavy divisions have fires SUAs. The sustainment SUA contains the old division support command (DISCOM) and the corps support units not divided among the BCT's brigade support battalions (BSBs). The fires SUA is a combination of division artillery (DIVARTY) and reinforcing corps artillery brigades. The maneuver enhancement (ME) SUA gets the remaining engineers, military police (MP), and air defense artillery (ADA). The battlefield surveillance (BFS) SUA houses a military intelligence (MI) battalion and, until recently, the division cavalry squadron. These SUAs are little more than a re-creation of elements of the old division base. With the BCTs specialized for ground maneuver, other key battlefield responsibilities bubble up to the UEx by default. Small BCTs require creating and resourcing UEx-subordinate SUAs.

The SUAs' cost is driving the Army to admit it cannot allocate the full complement of SUA headquarters to each division UEx in the Army Campaign Plan.[3] The SUA base designs (all of which are colonel commands requiring a brigade headquarters, signal company, and various service support units) require several hundred soldiers each before a single functional battalion is even assigned. For example, a sustainment SUA has 365 soldiers in its headquarters and signal company, even if no battalions are assigned. A fires SUA has 278 soldiers in its headquarters and headquarters battalion, signal company, and BSB headquarters and headquarters company (HHC), but only one organic multiple-launch rocket system (MLRS) battalion. These 278 soldiers are not needed to command and control (C2) or sustain the MLRS battalion. The ME and BFS brigade bases are similarly designed and represent significant overhead cost.

The UEx Digital Warfighter 05 Omnifusion Block II Experiment, conducted from 22 March to 8 April 2005 at Fort Leavenworth, Kansas, demonstrated how expensive the new SUA designs are. In the experimental scenario, a modular heavy division with a UEx headquarters, three heavy BCTs, one Stryker BCT, a heavy aviation brigade, and a full complement of SUAs conducted offensive operations against a defending near-peer competitor. The three heavy BCTs had 174 Abrams and 267 Bradleys (441 combined). However, with the addition of the SUAs, the modularized division grew to

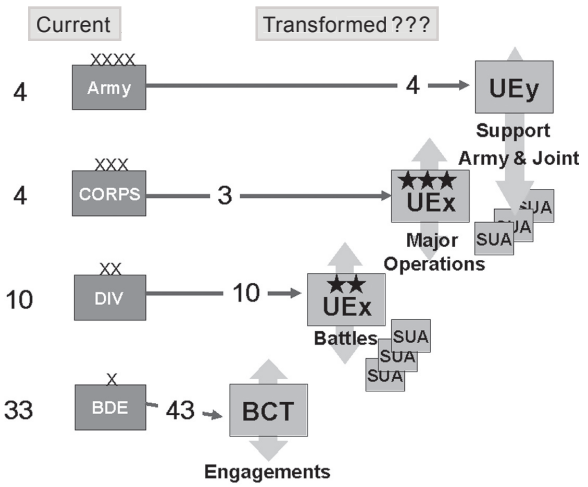
Heavy Division
IN/AR Cos: 27 to 32 (9 bns of 3 to 8 bns of 4)
Scout Plts: 28 to 32 (includes tanks from old Div Cav)
155 Btrys: 9 to 8 (guns increase from 54 to 64)

Heavy Brigade
IN/AR Cos: 9 to 8
Scout Plts: 5 to 8
155 Btrys: 3 to 2 (guns decrease from 18 to 16)

Infantry Division
IN Cos: 39 to 32 (9 bns of 4 to 8 bns of 4, loss of LOSAT bn)
Scout Plts: 19 to 28
105 Btrys: 9 to 8 (guns increase from 54 to 64)

Infantry Brigade
IN Cos: 12 to 8 (includes AT and Weapons Cos)
Scout Plts: 5 to 7
105 Btrys: 3 to 2 (guns decrease from 18 to 16)

Figure 2. Transformation of IN/AR/FA structure.



Divisions go from three ground maneuver brigades to four smaller maneuver-focused BCTs, forcing retention of all division and several corps HQs, and causing proliferation of UEx-level support UAs.

Figure 3. Effect of small BCTs.

over 35,000 soldiers and 9,500 vehicles.[4] By comparison, the 3d Infantry Division (ID) (Reinforced) went into Iraq with 247 Abrams and 264 Bradleys (511 combined) and about 21,000 soldiers, while all of V Corps had about 10,000 vehicles.[5] SUAs are creating a situation in which the Army needs a corps' worth of tail to support a division's worth of tooth. And, because all SUAs require protection on the contemporary, noncontiguous battlefield (protection the small BCTs, with only eight combat companies, cannot afford to provide), protection of SUAs became the main focus of the Stryker BCT during the exercise.

The small BCTs are causing proliferation of CS and CSS SUAs and retention of unnecessary personnel in division and corps headquarters. The Army hoped the UEx would reduce the number of divisional headquarters, but span-of-control factors are forcing the Army to create a UEx headquarters for all 10 transforming divisions. Four small BCTs, an aviation brigade, and a few SUAs pretty much exhaust the UEx headquarters' span of control. Tying the division UEx to the C2 and support of its subordinate BCTs and SUAs limits its assumption of corps responsibilities. Small brigades force the Army to retain nearly all its division and corps structure. If 3d ID, 101st Airborne (ABN) Division, 82d ABN Division, and other units in theater had been modularized along current designs during Operation Iraqi Freedom (OIF), V Corps would still have been needed as an intermediate headquarters between the divisions and the joint force land component command (JFLCC). As a consequence of the small, maneuver-focused BCT, the modular Army will maintain its four original echelons, not be reduced to three (figure 3).

Rethinking the Modular Brigade Base

The Army should revisit BCT design to make the BCT capable of operating independently without relying on UEx SUAs for combat, CS, and CSS, except aviation support. Only when the BCT assumes nearly all divisional functions can the UEx assume corps-level functions. Brigade and battalion headquarters must command an appropriate, that is, a larger, number of subordinate maneuver units.[6] The unaffordable proliferation of headquarters in the modular force is largely caused by failure to fully use BCT C2 capabilities.[7] Diseconomies at the bottom become more costly as their consequences move up the hierarchical chain.

One solution is a large combined arms BCT. (See figure 4.) Other large brigade designs are possible, but I prefer to construct the large BCT, with some minor changes, from approved company and battalion modular designs because these units are serviceable and widely accepted. The large BCT is not an alternative to modularity; it is a less costly way to better achieve its goals by arranging and combining its substructures.

With a brigadier general commanding the large BCT and two assistant commanders responsible for intelligence, maneuver, fires and sustainment, infrastructure, and civil-military operations, respectively, the headquarters would grow to nearly 185 people.[8] The new BCT would command 4 maneuver battalions, not just 2 as in the current design, and provide 16 IN/AR companies, compared

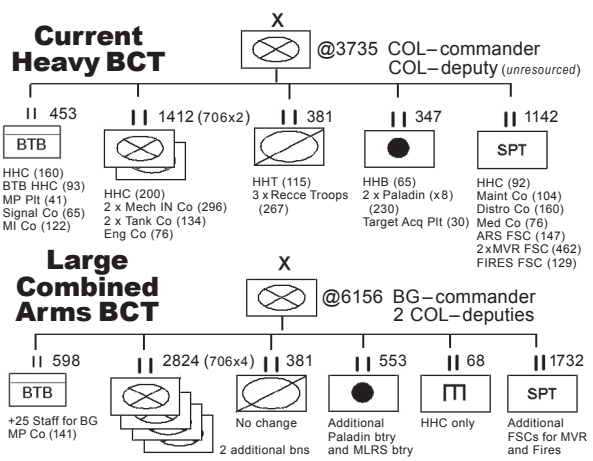


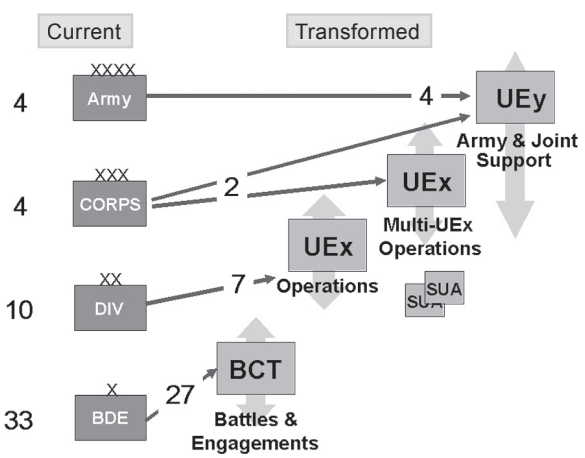
Figure 4. Comparison of BCTs.

with 8 in the small BCT and 9 in a Force XXI or limited conversion brigade.[9] With the addition of another Paladin battery and an MLRS battery, the fires battalion would command 4 batteries, not 2, with about half of the Force XXI DIVARTY's 155 howitzers, plus organic MLRS for counterbattery and long-range fires.

The unneeded and problematic BTB headquarters would be eliminated. Instead, a 68-soldier engineer battalion headquarters would have administrative control (for manning and training) of the sapper companies assigned to maneuver battalions. More important, the engineer battalion would exercise C2 of attached or OPCON bridging, horizontal construction, vertical construction, and specialty engineering companies and construction contractors employed in the area of operations (AO). An MP company, not a platoon, would support and protect the expanded BCT AO. Additional forward support companies would supplement the BSB to support the increased maneuver and fires structure.

The large combined arms BCT would have—

- Twice the maneuver strength as the small BCT.
- More than twice the artillery and engineering support.
- Three times as many MPs as the small BCT.
- Roughly the same capability as two small BCTs, but with 1,400 (19 percent) fewer soldiers.
- Roughly half a division's worth of ground combat power. In essence, each division would be divided into two large BCTs and one aviation brigade.



Large combined-arms BCTs commanded by brigadier generals reduce requirements for UEx Headquarters and Support UAs. Army structure flattens, with savings reinvested in combat troops.

Figure 5. Transformation based on large BCTs.

The large BCT would no longer replace the current brigade, but would replace the current division. Because the large BCT would have expanded combat and CS capability and organic CSS, it would not depend on division SUAs. With the joint force air component commander providing close air support and Army aviation support (attack, reconnaissance, lift, and command aviation support) from its normally associated aviation brigade, the large BCT would be a dominating presence within its AO and provide a more robust platform for the varied task organizations required in stability operations and support operations.

Second-Order Benefits of Larger BCTs

Elevating and enlarging the BCT to assume all divisional functions (less aviation) results in the force structure shown in figure 5, which looks a lot like the modularity concept in figure 1. Doing so would pay big dividends in that there would be fewer requirements and bills for UEx, SUA, and BCT headquarters.

Using large BCTs, the UEx could control two legacy divisions' worth of ground and aviation brigades and a smaller menu of SUAs oriented toward UEx-level missions, not brigade support, which in essence would make the UEx a headquarters for a small corps. In smaller scale contingencies, as in OIF, the UEx would be directly subordinate to the JFLCC. If OIF had been fought with large BCTs, the combined JFLCC would have commanded the 1st Marine Expeditionary Force, a UEx made up of 3d ID and 101st ABN Division assets, and another UEx from 82d ABN Division assets and units that had completed reception, staging, onward movement, and integration. V Corps would not have been needed as an intermediate headquarters.[10] The UEx headquarters could alternatively serve as the joint task force headquarters. UEx headquarters would command other UExs only during a major theater war requiring nearly the entire force structure—active and reserve. In that extreme and unlikely case, the superior UExs would be equivalent to World War II armies, each commanding multiple corps-size units.

The Army could re-mission, streamline, or eliminate UEx SUAs no longer required for BCTs' direct support. Force designers should consider the following suggestions.

Combine sustainment and ME brigades. Because both SUAs operate in the same geographical area with the same units mutually supporting or being supported, the sustainment and ME brigades

should be combined. The new support brigade, with a brigadier general commanding, would sustain the UEx and protect and maintain lines of communication to the theater base; in essence, spanning the geographical and capabilities gap between the theater base, and BCT BSBs. The support brigade should be combined-arms-capable and allow attachment of maneuver battalions when the need arises. The Army should allocate one support brigade headquarters per UEx and determine the number of subordinate battalions by operational need.

Eliminate the fires brigade headquarters. The Army should eliminate the fires brigade headquarters, establish a more robust targeting element at the UEx level, and attach artillery battalions directly to the BCTs, even if they fire in general support of the UEx. The noncontiguous battlefield requires artillery battalions to collocate with BCTs to stay within range of the enemy and to receive better protection and sustainment.[11]

Eliminate the BSF brigade headquarters. The BFS brigade headquarters is an unnecessary level of supervision. The single MI battalion should be directly subordinate to the UEx headquarters.

Establish "force provider" headquarters no lower than theater level. A force provider headquarters should only be established at the theater level, not within the UEx. The Army can gain efficiencies by task organizing scarce units directly to the brigades that will employ them.

Total Army Analysis must determine the numbers of large BCTs, UExs, SUAs, and UEys the Army requires and can resource. The numbers in figure 5 are only reasoned estimates. Elevating the BCT in capability would allow the higher headquarters the reductions Army leaders initially desired.

Force Structure Savings Quantified

Creating large BCTs from the legacy divisions will be less costly and traumatic than creating small BCTs because large BCTs would reduce the number of brigade and battalion headquarters; small BCTs increases them. Eliminating unneeded headquarters is the best source of manning for the significantly larger BCT and UEx headquarters. Conversion based on large BCTs nets a savings of eight headquarters per legacy division. Only one new headquarters (for an ARS) is needed. On average, nine old headquarters are not needed (one forward support battalion [FSB], one engineer battalion, two field artillery battalions, the signal and ADA battalions, and three brigade-level HHCs: one maneuver, the DIVARTY, and the division engineers [DIVENG]). The MI battalion and DISCOM headquarters often will be needed to source the UEx MI battalion and support brigade SUA. By contrast, modularity conversion based on the small BCT design adds headquarters, requiring 10 new headquarters (1 BCT, 4 brigade troops battalions [BTBs], 3 ARCs, 1 FSB, and 1 special troops battalion), with only 7 sourcing headquarters (DIVENG and the signal, engineer, and ADA battalions). The MI, DIVARTY, and DISCOM headquarters generally become UEx SUA HHCs. The Army has to field three new brigade or battalion headquarters, as well as an expanded divisional (UEx) headquarters per division converted to small BCTs. No wonder the Army has difficulty manning and equipping the headquarters for this small-BCT force.

The savings in disestablishing (or never establishing) unneeded headquarters is significant. Each UEx headquarters requires about 1,000 soldiers, and its SUA headquarters about 500 soldiers. The savings is probably 1,500 soldiers per UEx not created, if not more. UEx and SUA savings resulting from large BCTs would be at least 6,000 soldiers. (See figures 2 and 5.) Also, fully utilized BCT headquarters means fewer headquarters for each supported maneuver battalion and artillery battery. The current heavy BCT BTB has 453 soldiers; the BSB HHC has 91; each ARS headquarters and headquarters troop has 62; and each underused fires battalion headquarters costs 87 soldiers—nearly 700 headquarters soldiers in the underemployed small-BCT base.

Sorting the current division assets into two large BCTs each, rather than four small ones each, would save over 14,000 brigade and battalion headquarters spaces in the 20 brigade bases not built. Combined with the savings from fewer UExs and SUAs, the total savings would be about 20,000 headquarters spaces—all overhead—without eliminating a single infantry, armor, engineer, support, or maintenance company.

More Combat Power

The Army should invest the savings in building large BCTs, to total 24 when conversion is complete.[12] (I assume the Army will also keep five Stryker brigades.) The 24 large BCTs would contain 384 IN/AR companies, 80 more (26 percent) than the 304 in the 38 small BCT force now in the Army Campaign Plan, and 20 more (5.5 percent) than the 43 small BCT force that requires a 30,000-

soldier end-strength increase.

Reinvesting the savings that large BCTs would generate into creating additional large BCTs, whether infantry or armor will provide much-needed relief for those doing most of the fighting and dying in Iraq and Afghanistan, or in any war for that matter. Creating more combat units is the most direct, effective way to reduce deployments overseas for the Army's combat brigades and the soldiers assigned to them. A 26 percent growth in the IN/AR force structure, even if organized in 24 large brigades, would allow for a sounder overseas rotation scheme than would 38 small brigades with little or no growth in combat arms strength.[13]

The large BCT force would be more efficient. Fewer soldiers would have to be deployed to generate the same combat power in theater, and more combat units would be available for deployment. To deploy a division's worth of ground combat power into theater, the Army would have to send four BCTs of the 43 small BCT force (9.3 percent), as was the case with the 3d ID in OIF3.[14] Only two BCTs of the 29 large BCT force (6.9 percent) would be required. Put in other terms, if the standard for combat deployment for active component BCTs is 1 year in 3, the 43 small BCT force would yield 3.6 current division equivalents on station in theater, while the 29 large BCT force would support 4.8 current division equivalents, with 33 percent more available ground combat force. In terms of soldiers required per combat battalion deployed or in terms of combat units available for deployment, the large BCT force would be significantly more efficient than the small BCT force. More units for deployment and fewer soldiers per deployment means the Army could reduce the soldier rotational tempo by one-third; that is, 1 year in 4, and still generate the same combat power overseas.

Streamlining the C2 Structure

The Army's intent in modularity was not to create a more lavish C2 structure, but to streamline it. The Army wanted more combat units for overseas rotations, not fewer. However, the current modularity conversion seems to be unwittingly sacrificing foxhole strength in combat arms to build underused, redundant headquarters structures, which is exactly the opposite of what the Army intended when it began the modular transformation.

We now know enough about how modularity works to make the necessary beneficial corrections, which, in the grander view of Army Transformation, are not that great. We can significantly reduce the stress on the average soldier by creating more companies and battalions, not unneeded BCT, UEx, and SUA headquarters. The Army would have more combat power to support combatant commanders overseas and to ease strains on the All-Volunteer Army. MR

NOTES

1. U.S. Army Training and Doctrine Command (TRADOC), "Primer on Army Modularity," briefing to the U.S. Joint Forces Command, 1 December 2004. The briefing slide appears in many modularity briefings and documents, often with different text.

2. *The Army Comprehensive Guide to Modularity Version 1.0* (Fort Monroe, VA: Headquarters TRADOC, 8 October 2004), chaps. 8 and 9, app. B, D, and E, and the U.S. Army Force Management and Support Agency (USAFMSA) Table of Organization and Equipment (TOE) and Modified TOE databases, on-line at <www.usafmsardd.army.mil>, accessed 10 June 2005. Also available at <https://webtaads.belvoir.mil>. Current force data is from the USAFMSA website.

3. GEN Dick Cody, briefing on the Army Campaign Plan, Senior Army Commanders Conference, 21 October 2004, Washington, D.C.

4. TRADOC determined the support unit of action's (SUA's) task organization.

5. Gregory Fontenot, E.J. Degen, and David Tohn, *On Point* (Leavenworth, KS: Combat Studies Institute Press, 2004), 80, 88.

6. "Modular Brigade Combat Teams: Task Force Modularity White Paper Part III" (draft), 15 July 2004, 32-33. (No other publishing information given.) The authors argue that the brigade combat team (BCT) should have a third maneuver battalion; that combat effectiveness increases in proportion to ground maneuver platoons; and cite endurance and flexibility as additional advantages of additional battalions.

7. U.S. Army Field Manual (FM) 5-0, *Army Planning and Orders Production* (Washington, DC: U.S. Government Printing Office [GPO], January 2005), F-2, provides guidance on span of control as being two to five subordinate units. Modular designs are generally based on a span of four or five. Combined arms battalions command four maneuver companies, plus engineer, scout, mortar, and various other supporting units. UExs command on average four or five BCTs, plus other brigade and support elements. Only the BCT has the minimum span of control.

8. Compared to 265 people in the headquarters and headquarters company (HHC) of the limited conversion heavy division and 89 people in the HHC of the current heavy brigade, the large BCT headquarters contains three times the personnel of an existing brigade headquarters or 70 percent of the old division staff.

9. The Army of Excellence balanced brigade of the 1980s and 1990s had 16 ground maneuver companies.

10. "Task Force Modularity UE [unit of excellence] Overview," briefing to the Vice Chief of Staff of the Army and the Army Staff, slide 6, Headquarters, Department of the Army, Washington, D.C., 9 August 2004, shows that a combined joint force land component commander and staff could directly command two UExs, a U.S. Marine Expeditionary Force, and a multinational force without an intervening corps.

11. *Modular Brigade Combat Teams*, 30-31. Note that even multiple-launch rocket system batteries must be deployed in the BCT footprint and rely on the BCT for security and protection. The closest source of general support artillery sustainment would be a BCT brigade support battalion.

12. The Army Campaign Plan establishes a 2010 goal of 20 heavy BCTs (3,735 soldiers each); 18 infantry BCTs (3,369 soldiers each); and 4 unneeded UEx headquarters/SUA structures (6,000 soldiers each), totaling 141,342 soldiers. The same number of soldiers could be used to build 12 large heavy interim BCTs (6,071 each) and 12 large infantry brigade combat teams (IBCTs) (5,491 each). Large IBCTs would follow the same design principles as the large heavy BCTs.

13. If only one small BCT's-worth of combat power were needed, half of a large BCT could be sent overseas, and a deputy commander would be available to command the stay-behind force, which would become part of the rotational pool. Large BCTs do not preclude the inevitable small operations.

14. OIF3 indicates a unit's third rotation in-theater.

Lieutenant Colonel Stephen L. Melton, U.S. Army, Retired, is an instructor, Center for Army Tactics, U.S. Army Command and General Staff College, Fort Leavenworth. He received a B.A. from the University of California, Berkeley, and an M.A. from the University of Missouri, Kansas City. He has served in various command and staff positions in the continental United States and Korea.